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**We've Rattled Our Sabers...Now What?  
The Future of US/China Space Relations**

by

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## **Abstract**

US/Chinese relations regarding space have been particularly tense since the end of the Cold War. The US's success in defeating the Iraqi Army in Operation Desert Storm was viewed by the Chinese as both a wake-up call and an opportunity. They realized that their conventional capabilities were lacking and the US's reliance on space capabilities presented a possible Achilles heel that could be targeted in future conflict. As the new global hegemon, the US chose to embrace its strength and used very strong rhetoric to deter others from challenging their position. Unfortunately, this strong language scared others (as was intended) but failed to deter them from developing countermeasures. China, in particular, developed an arsenal of counterspace capabilities and has intensified their rhetoric to counter US dominance of space. However, war between China and the US is not advisable to either party due to their symbiotically-linked economies. War between them would have tremendous economical impacts. This paper offers a new path for the US in regards to space relations with China. This new strategy turns away the deterrent strategy in favor of a cooperative strategy. This new strategy would hopefully ease the tensions that have built between the two, end the space arms race that's current occurring, and result in a future where freedom of space is protected.

## **We've Rattled Our Sabers...Now What? The Future of US/China Space Relations**

Since the United States' swift defeat of Iraqi forces in Operation Desert Storm in 1991, US/Chinese relations regarding space have been particularly tense. Often dubbed the "first space war", Desert Storm demonstrated a so-called revolution in military affairs enabled by the synergy of traditional warfighting mediums (air, land, and sea) with space-based capabilities. China viewed this war as both a wake-up call (since their conventional capabilities were lacking) and an opportunity (since the US's dependence on space could potentially be exploited).<sup>1</sup> The nearly two decades since Desert Storm have been marked by belligerent rhetoric and culminated with muscle-flexing tests by both the US and China. This paper discusses the more pertinent rhetoric exchanges since 1991, analyzes the apparent message being sent by the US and the Chinese response, and posits a best course of action for US behavior in regards to future US/China space relations. The US and Chinese economies are symbiotically linked and a space war is not advisable to either party. Future engagements must focus on cooperation and mutual understanding to avoid misguided, unnecessary escalatory space activities.

To set the stage for this discussion, the US's role in the early 1990s was that of the globe's only superpower. The Cold War stare down with the Soviet Union had ended, and no peer competitor was seen on the horizon to combat the US's military strength. China at this time was viewed as a rising economic power but not necessarily a military threat to the US. The US had to decide how to wield its power in a unipolar world, and China had to decide whether it was comfortable with the US's hegemony or if they could do something to counter the US's power.

As the new global hegemon, the US chose to embrace its power and wield it generously in favor of its interest. For instance, the Department of Defense's *Joint Vision 2010* (published

in 1996) proposed pursuing “full spectrum dominance” so as to dominate opponents “across the range of military operations.”<sup>2</sup> The strength of this rhetoric may be understandable given the US’s emergence from the Cold War victorious and the trouncing of the world’s fourth largest army in Operation Desert Storm. But, is it necessary for the US to state its intentions so aggressively? Does the world who reads such language view US goals as benign? If the US had hoped to be viewed as a benevolent hegemon in regards to space, the publishing of the US Space Command’s *Vision for 2020* in 1997 crushed such a desire. This document advocated active defense measures on spacecraft and “an ability to deny others the use of space, if required”.<sup>3</sup> It also closed with an artist’s conception of a space-based laser targeting the Middle East (see Figure 1 below)<sup>4</sup>.



**Figure 1: Artist’s Conception of Space-Based Laser from USSPACECOM’s *Vision for 2020***

Other aggressive space rhetoric appeared in the 2003 *US Air Force Transformational Flight Plan* which included “Hypervelocity Rod Bundles” (a.k.a. rods from God) as a key long-term program<sup>5</sup> and 2004’s *Air Force Doctrine Document 2-2.1* which officially codified Counterspace

Operations as a warfighting mission area.<sup>6</sup> Recently, the US continued the aggressive, unilateral rhetoric when it published its 2006 *National Space Policy* which again repeated that the US would dissuade, deter, defend, and deny, if necessary, to protect its space capabilities.<sup>7</sup> Though the US has traditionally advocated “peaceful uses of space”, the aforementioned types of rhetoric coupled with its preemptive war against Iraq and its refusal to sign space arms control treaties in order to keep “all options on the table” has caused the international community to view the US as a “bad actor bent of preemptive and hegemonic use of space power for its own purposes.”<sup>8</sup> China’s behavior and rhetoric during this time period indicate that they share this “bad actor” view of the US in regards to space.

Similar to the traditional US view of peaceful uses of space, China has longed advocated a weapons-free space. But faced with the US’s hegemonic power and belligerent rhetoric, China clearly decided to take action to counter US space power. The country quietly built anti-space capabilities throughout the last decade such as ground-based lasers, satellite jammers, and anti-satellite (ASAT) weaponry and intensified its rhetoric.<sup>9</sup> In January 2006, China released its *2006 Defense White Paper* which no longer included language “preventing an arms race in outer space”.<sup>10</sup> Subtle as this change may have seemed, the rhetorical die was cast. The next two years saw laser dazzling of US spacecraft and a successful direct-ascent ASAT demonstration by the Chinese (the US responded in kind with a successful satellite shoot down of its own in 2008).<sup>11</sup> With anti-space capability demonstrated, recent Chinese rhetoric has gotten more aggressive in its tone. For instance, China’s air force commander Xu Qiliang recently said “[a]s far as the revolutions in military affairs in concerned, the competition between military forces is moving towards outer space” and militarization of space is inevitable.<sup>12</sup>

Is Xu Qiliang correct? Is militarization of space inevitable? Is it in the interest of China

or the US to engage in a space war? Perhaps the answer to all these questions is an emphatic no! The US and Chinese economies are symbiotically linked. For example, US and China trade in 2008 amounted to greater than 400 billion dollars.<sup>13</sup> Outset of war between the US and China would have horrific economic ramifications to both parties. In addition, both countries have thriving space programs and rely heavily upon space platforms for military and economic purposes (albeit the US is far more reliant). So, the resulting acts in space would asymmetrically affect both nations. China and the US would be foolish to instigate a space shooting war because the “ensuing debris could quickly render Earth orbital space unusable for centuries.”<sup>14</sup> Also, there would be great pressure from other international space powers to avoid space war since they could eventually become collateral damage of a US/China kinetic conflict in space. Given that space war is not advisable, what can the US do to prevent it?

Xi Qiliang argues that that “Only power can protect peace”.<sup>15</sup> This view is shared by many US policy makers as well who believe that the only way to prevent space war is to develop a strong deterrent capability. Others, however, argue that cooperation is necessary to prevent a space arms race.<sup>16</sup> Both of these paths have advantages and disadvantages. Let’s first look at the plusses and minuses of preventing space war via developing a powerful deterrent.

Traditionally, US deterrent means have been largely based on technology. Those efforts involved developing advanced offensive and defensive capabilities and successfully demonstrating them. This, in theory, deters other nations from challenging our position of strength. Besides theoretically preventing war, another advantage of this strategy is preparedness. By developing advanced capabilities, the US would be prepared to defend its space interests should they be threatened.

A major disadvantage of pursuing deterrence for space is cost because “[t]he quest for

unassailable space technology, arguably an impossible goal, will certainly be obscenely expensive.”<sup>17</sup> Another disadvantage is that an aggressive deterrent strategy can be viewed as threatening and lead to an arms race and “even great insecurity.”<sup>18</sup> Another aspect of deterrence (that could be viewed as an advantage or disadvantage depending on your viewpoint) is that it does not require extensive engagement between the rival parties. It is apparent (rhetorically speaking) that the US was on the deterrence path in recent years in regards to space war prevention. Unfortunately, much of this rhetoric stepped far beyond what was technologically feasible and left the US vulnerable to countermeasures developed by an undeterred party (despite the futuristic capabilities being conveyed in US “vision” statements).

China received the message of US power but was not fully deterred. They decided to counter US strength by quietly developing countermeasures to stop the US’s march toward “space dominance”. During this period, there was very limited contact between the US and China on space matters. This lack of interaction has led to a very “high level of suspicion...setting up an antagonistic if not adversarial relationship” between the two space powers.<sup>19</sup> The 2007 Chinese ASAT demonstration was a clear indication that US deterrence efforts have not produced the intended results. Perhaps a change in strategy is necessary to prevent space war between the Chinese and the US and to avoid the crippling economic ramifications of such an endeavor.

An alternative to a deterrent strategy is a strategy based on cooperation and engagement. This involves working together, interacting to understand each other’s desires and intentions, and negotiating future course of actions that are mutually beneficial. Actions that could take place in a cooperative US/China relationship include: negotiating bans on space-weaponry, agreeing to “rules of the road” or “codes of conduct” for operations in space<sup>20</sup>, cooperative programs, and

military or civilian exchange programs. Certainly not all encompassing, these few examples each have obvious advantages and disadvantages for the US if a cooperative strategy was pursued.

If the US were to negotiate a ban on space-weaponry, it would be a significant departure from historical behavior. The US has long maintained that it will not approve any “restrictions that seek to prohibit or limit US access to or use of space.”<sup>21</sup> So, what would the US gain from reversing course? One advantage of such an action would be the departure from the aggressive, unilateral path which the US is currently on.<sup>22</sup> While viewed as the hegemon bent on dominating all warfighting mediums, the US has a very difficult time dealing with matters that require international collective action as its intentions are often viewed suspiciously. In addition to this bit of face saving in the international community, such an action presents the possibility of stemming escalation as well as potential cost savings.<sup>23</sup> Reversing course and limiting space options also presents the US with major questions that need to be considered. Some argue that “[a]ny conceivable international agreement on military uses of space is unverifiable and unenforceable...[it] encourages responsible nations into complacency while ruthless actors violate it.”<sup>24</sup> By negotiating for and complying with a ban on space-weaponry, the US could find itself unprepared for attacks against its space systems by weapons developed secretly in violation of signed international treaties. As Reagan once said, “trust, but verify.”

Much like a negotiated ban on space-weaponry, agreed to “rules of the road” for space operations would help the US’s stance in the international community. This would add norms upon which the US could base objections to other countries actions. For example, with a negotiated “keep out” zone agreed to surrounding spacecraft, the US would have international consensus for a protest if a spacecraft were to maneuver within that window. This is important

because current policy and doctrine place the US in a “tough policy dilemma, unable to claim the moral high ground.”<sup>25</sup> The US cannot object to much anyone does in space when it constantly espouses unlimited US freedom of action.

For both cooperative programs and exchange programs, the advantages and disadvantages are similar. In both cases, dialogue between the US and China would potentially add transparency for each side as to the other’s intentions, desires, and perceptions.<sup>26</sup> It would also help build working-level contacts that are critical to sustaining long-term trusting relations. An often voiced concern for US and China engagements is inadvertent technology transfer to China. There is certainly precedent for this concern (e.g. the missile technologies transfers of the 1990s<sup>27</sup>) and measures should be implemented to safeguard critical technologies. However, the potential improvement in relationships and the possibility of stemming the suspicion-driven space arms escalation is an undertaking worth the risk.

So, if the US were to change course and undertake a cooperative strategy, would the Chinese participate? I contend that they would, albeit very slowly and very cautiously. US and Chinese economies are mutually dependant and war between them would be mutually devastating. To be successful, the US would need to dedicate itself to a decades-long strategy as it will take thousands of interactions to lower the walls created from years of belligerent rhetoric and saber-rattling tests. A good first step toward a successful cooperative strategy would begin in international forums. By negotiating limitations and norms along with many other participants, US/China relations could begin to thaw. Cooperative programs and exchanges could follow to build a solid foundation for the future.

Clearly a change of direction is needed. The deterrent strategy pursued over the last couple decades has produced the exact opposite of what was intended. Rather than space

dominance, the US space capabilities are clearly threatened and vulnerable in future conflicts.

As stated in a joint statement after President Obama's meeting with Chinese President Hu Jintao in November 2009, the US and China "have common interests in promoting the peaceful use of outer space."<sup>28</sup> Maybe this is the first step away from the unilateral, deterrent path that has created so much angst in the space community.

## Endnotes

<sup>1</sup> Spencer and Gudgel, “The 2005 Quadrennial Defense Review: China and Space—The Unmentionable Issues,” 1.

<sup>2</sup> Joint Vision 2010, 2.

<sup>3</sup> USSPACECOM Vision for 2020, 10.

<sup>4</sup> Ibid., 15.

<sup>5</sup> US Air Force Transformational Flight Plan, 66.

<sup>6</sup> AFDD 2-2.1, All Pages.

<sup>7</sup> 2006 U.S. National Space Policy, 1-2.

<sup>8</sup> Milowicki and Johnson-Freese, “Strategic Choices: Examining the United States Military Response to the Chinese Anti-Satellite Test,” 6.

<sup>9</sup> Saunders and Lutes, “China’s ASAT Test: Motivations and Implications,” 1.

<sup>10</sup> Ibid., 2.

<sup>11</sup> Shanker, “Pentagon is Confident Missile Hit Satellite Tank.” .

<sup>12</sup> Clark.

<sup>13</sup> US Census Bureau.

<sup>14</sup> Milowicki and Johnson-Freese, “Strategic Choices,” 8.

<sup>15</sup> Clark, “China Declares Space War Inevitable.”

<sup>16</sup> Milowicki and Johnson-Freese, “Strategic Choices,” 8.

<sup>17</sup> Ibid., 7.

<sup>18</sup> Saunders and Lutes, “China’s ASAT Test,” 4.

<sup>19</sup> Hagt, 41.

<sup>20</sup> Logan, 6.

<sup>21</sup> 2006 U.S. National Space Policy, 2.

<sup>22</sup> Hagt, “China’s ASAT Test: Strategic Response,” 44.

<sup>23</sup> Logan, “China’s Space Program: Options for U.S.-China Cooperation,” 6.

<sup>24</sup> Kyl, “China’s Anti-Satellite Weapons and American National Security,” 1.

<sup>25</sup> Milowicki and Johnson-Freese, “Strategic Choices,” 3.

<sup>26</sup> Logan, “China’s Space Program,” 6.

<sup>27</sup> Cox, *U.S. National Security and Military/Commercial Concerns with the People’s Republic of China*, xii.

<sup>28</sup> Staff Writers, “US, China to step up military, space cooperation.”

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